Yakeen NEET 2.0 2026

Play with PHYSICS in MR Style

Lecture-01

(1) अलग से इसका Note बनाना है।
(2) Kuch बातें समझ ना आये, Pardon मत होना, जब Chapter आएगा वहाँ भी ये Question करेंगे।।

By - Manish Raj (MR Sir)

Topics to be covered

1. Practice Questions
2.
3.
4.

Question

If position of object $x = \frac{t^3}{3} - 2t^2 + 4t$, then find time when object will take U-turn.

(25%)

1. $t = 2$ sec
2. $t = 4$ sec
3. $t = 0$ sec
4. Will not take U-turn

(37%)

$$x = \frac{t^3}{3} - 2t^2 + 4t$$

$$v = \frac{dx}{dt} = \frac{1}{3}(3t^2) - 2(2t) + 4$$

$$v = t^2 - 4t + 4$$

$$v = (t-2)^2$$

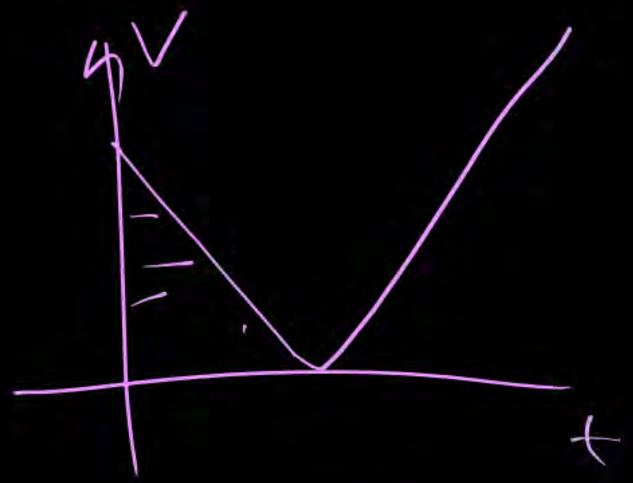
↳ velocity will be +ve for all value of time

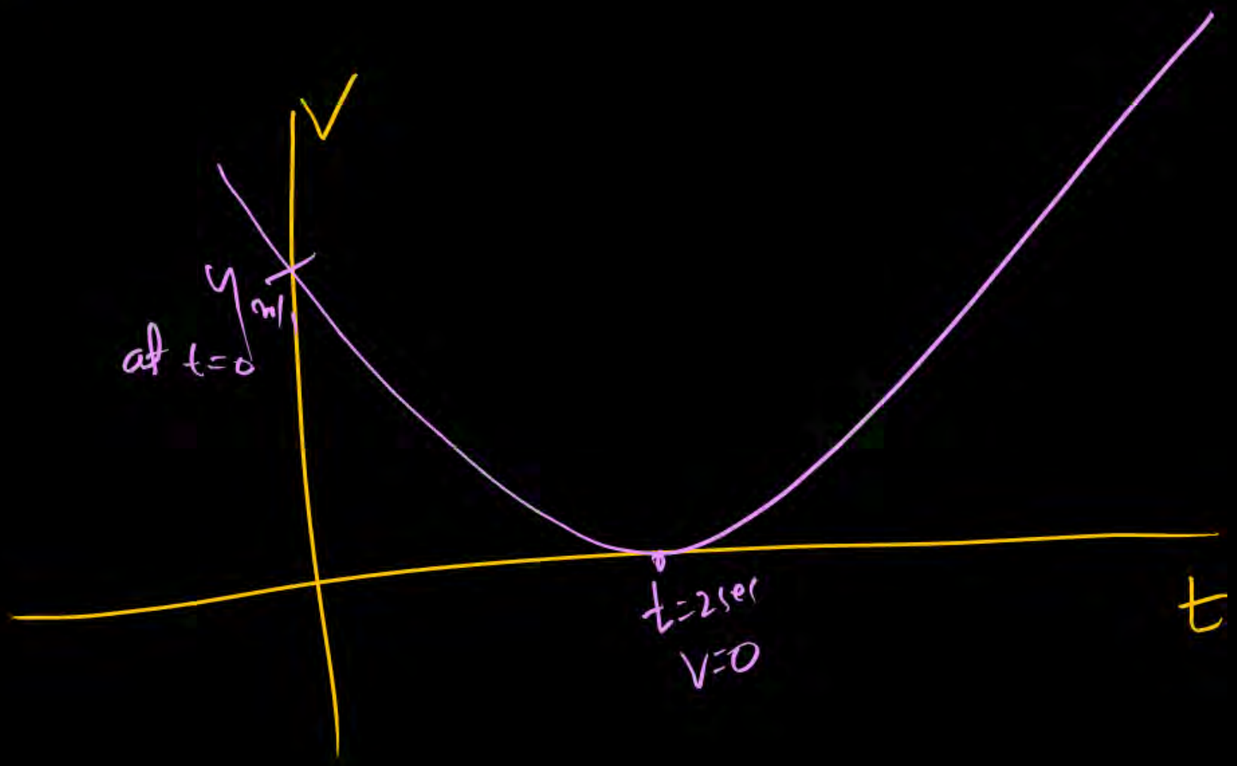
velocity will be zero at $t = 2$ sec

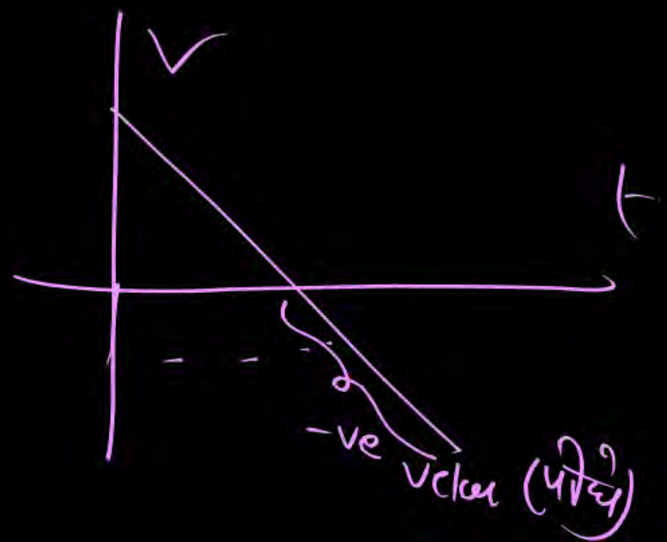
MR* Boy 1-D motion me U-turn lene ke liye object ruk (rest) kar hi lena hota hai

(instantaneously rest me aana hota hai)

$$v = t^2 - 4t + 4$$

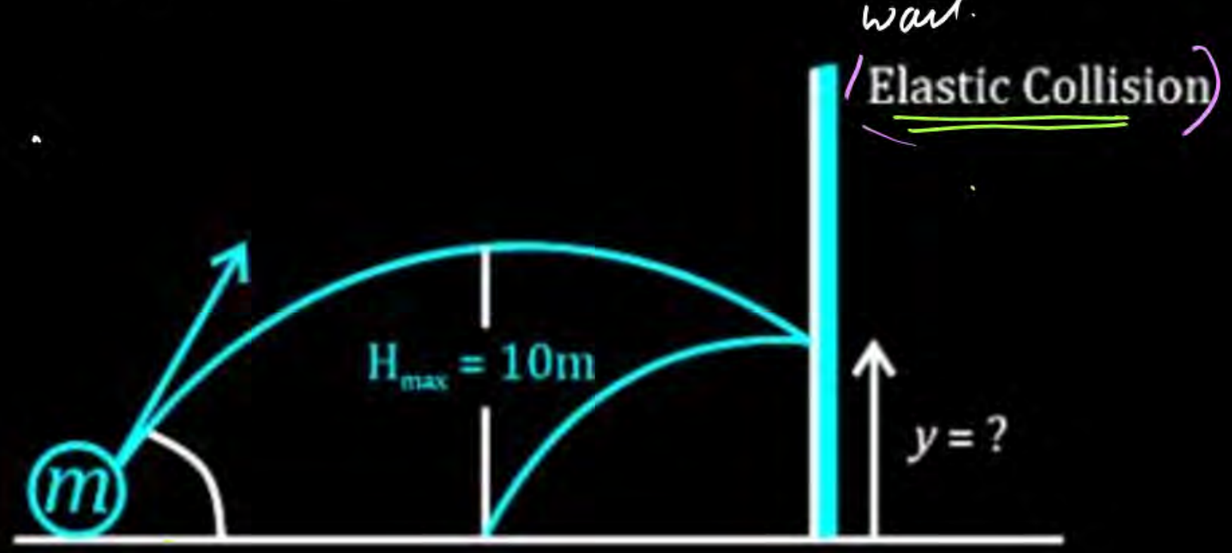






Question

Ball is projected as shown in figure. (u and θ is not known) it collide with wall and fall just below the maximum height, then find heigh on wall where it collide.



Horizontal motion is uniform in projectile ($a_x = 0$) $u = \cos t^n$

→ velocity along X-axis.

$u_x = u\cos\theta = \text{const}^n$

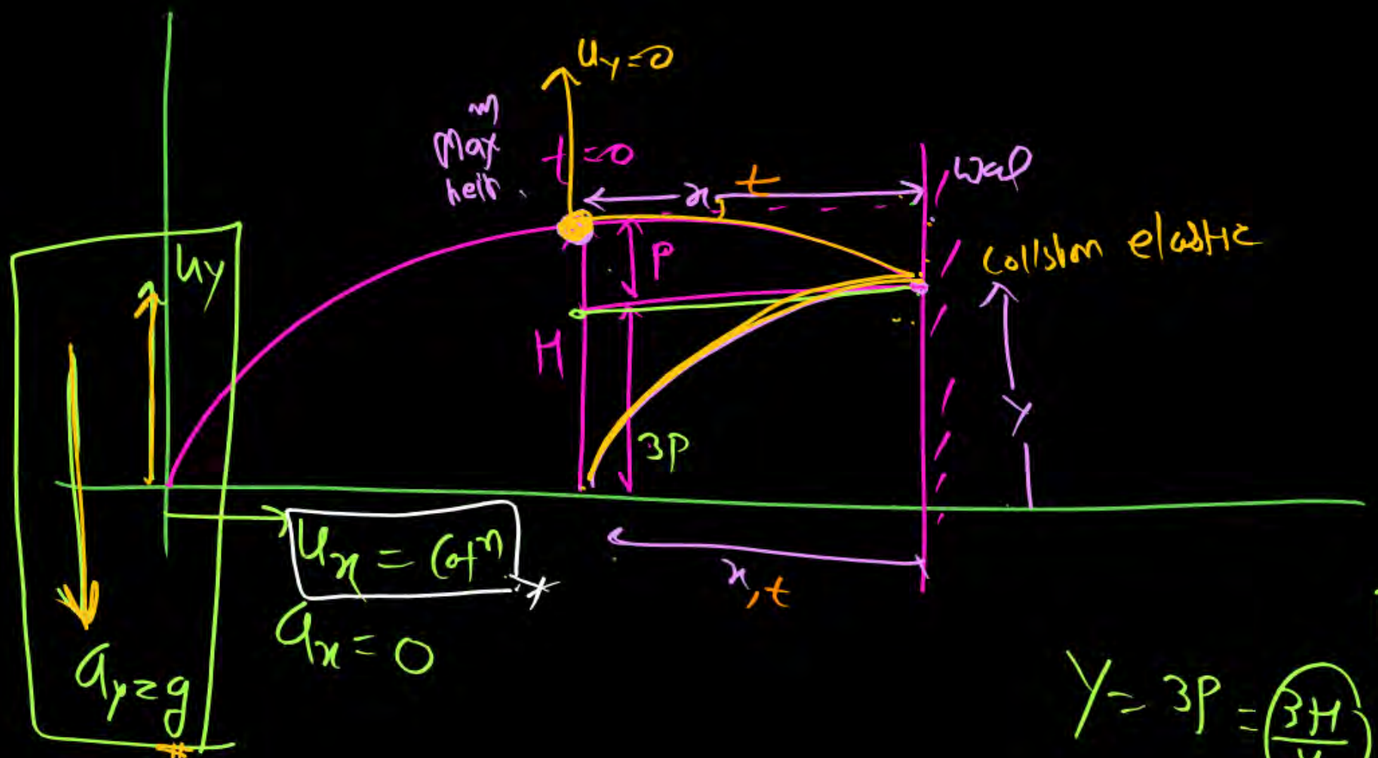
2-D Motⁿ ⟶ [1-D]$_{x\text{-axis}}$ + [1-D]$_{y\text{ axis}}$

Consider motⁿ from maxᵐ height along x-axis

$\vec{u}_x$ = Cotⁿ = Uniform

Rafter Cotⁿ ✓

$S = u(t)$ ✓



Consider motⁿ in Y-axis

at maxᵐ $u_y = 0$

a_y = Cotⁿ

Gallio ratio

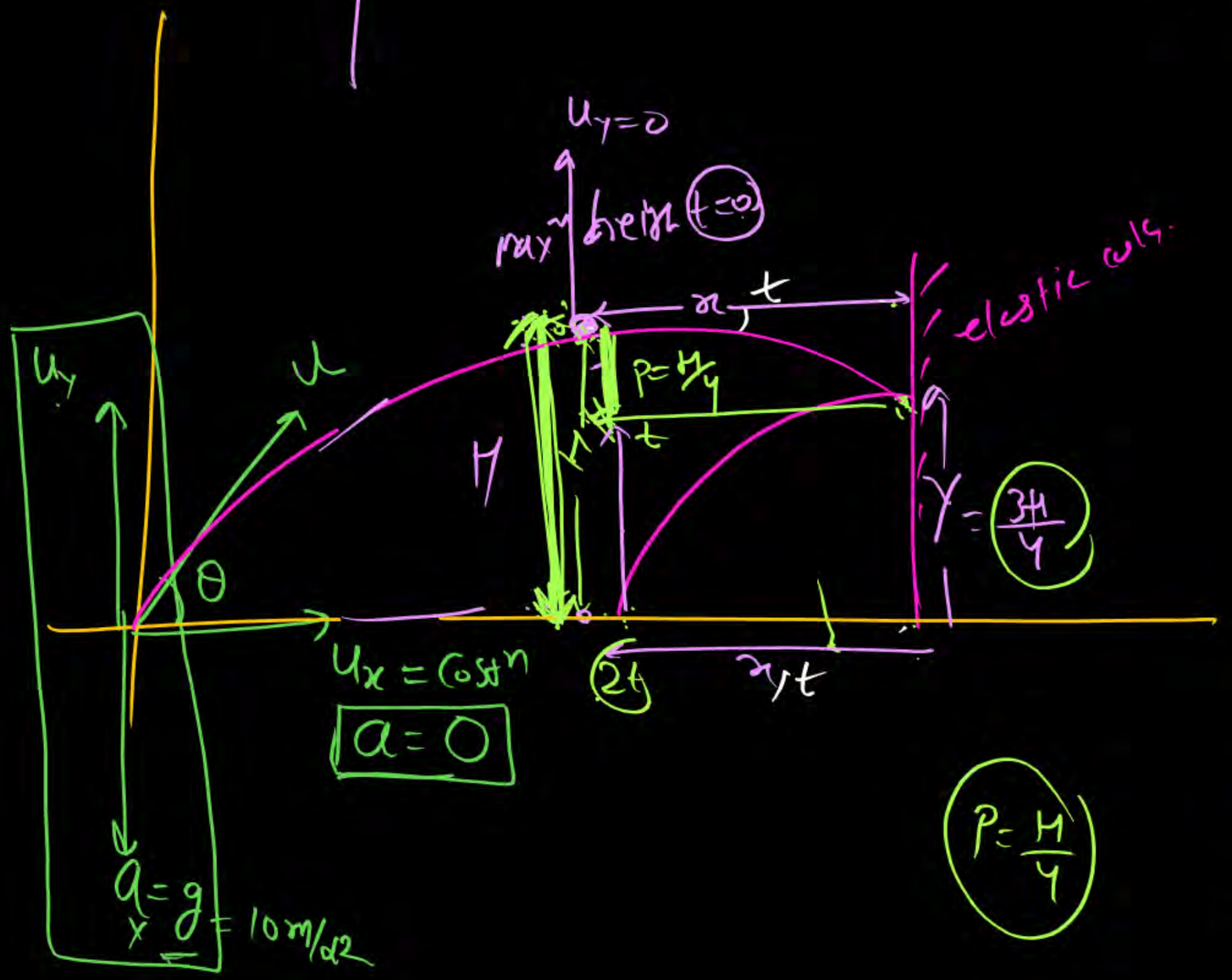
$S_t : S_{next} = 1:3$
$= P:3P$

$P + 3P = H$

$Y = 3P = \frac{3H}{4}$

$4P = H$

$P = H/4$



$P = \frac{H}{4}$

2-D motion = [1-D] x-axis + [1-D] y-axis

Consider motion along x-axis

$x = u_x \times t$

x: Same, u_x: fixed, t: Same

t = max^m Height to ward = ward to Max^m height

Consider motion along 'y'

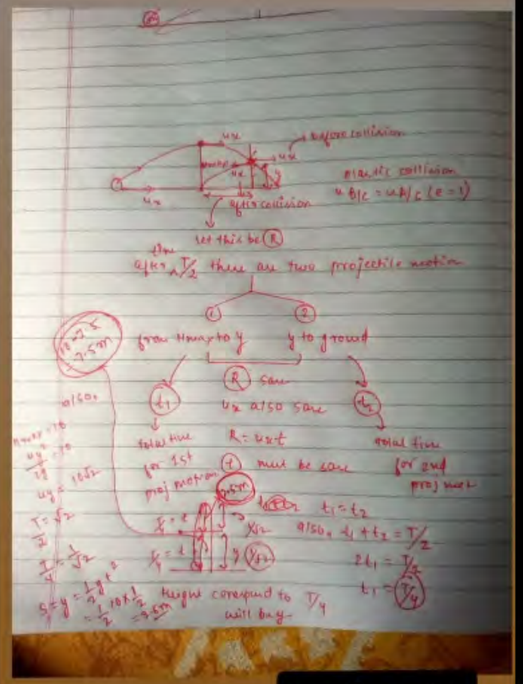
$(u_y)_{max} = 0$

$P = \frac{1}{2} g (t^2) \rightarrow a_y = g\,(\text{const})$

$H = \frac{1}{2} g (2t)^2 = 4\left(\frac{1}{2} g t^2\right) = 4P$

3:39

Mentions · the_clumsy_dropper 6m



@mrsir_mrstar

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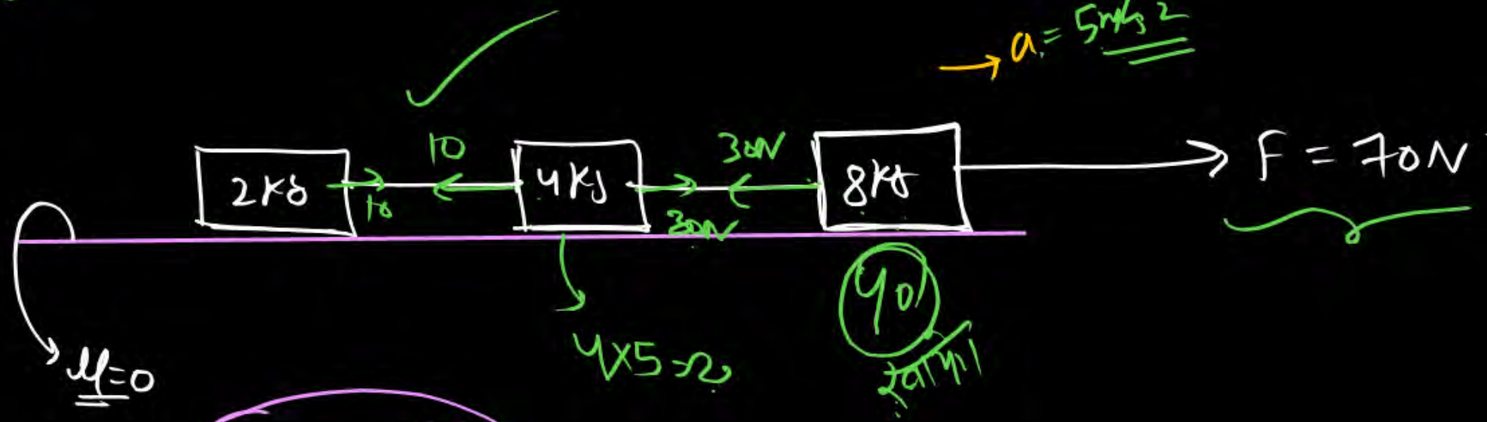
Question neet

Find T_1 and T_2?

$u = 0$

$a_{net} = \frac{F_{net}}{mass}$

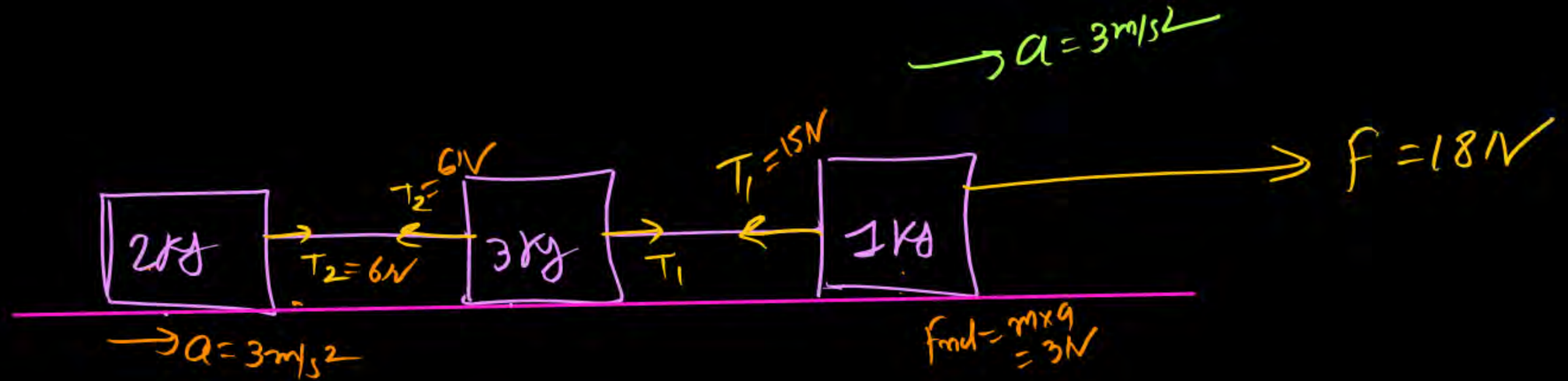
$= \frac{70}{14} = 5 m/s^2$



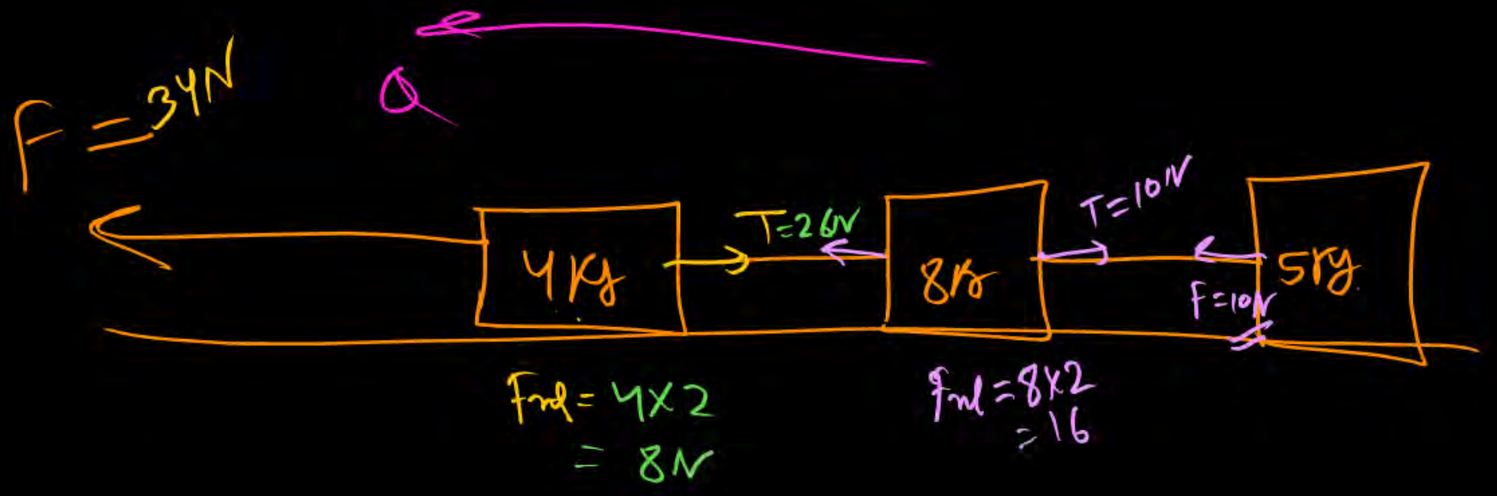
$a = 5 m/s^2$

$F_{net} = m \times a$

m mass kg object a acc^n se change ke liya ma face krta h.



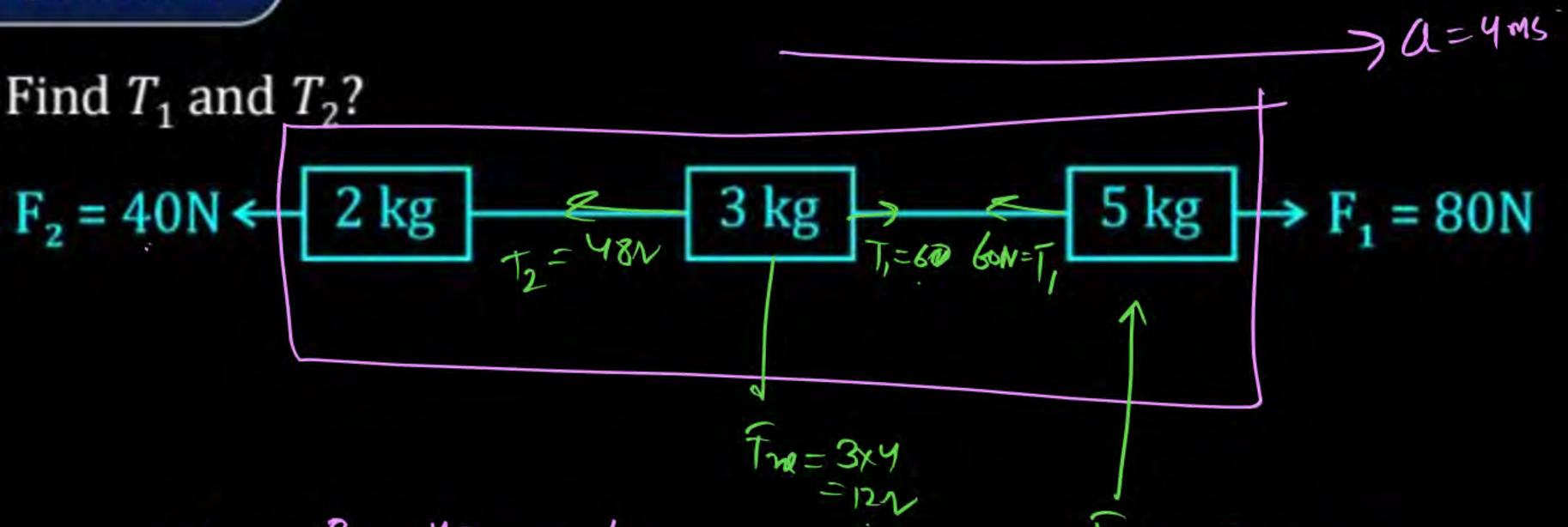
$$a = \frac{18}{6} = 3\,m/s^2$$



$$a = \frac{34}{17} = 2\,m/s^2 \quad \checkmark$$

Question

Find T_1 and T_2?

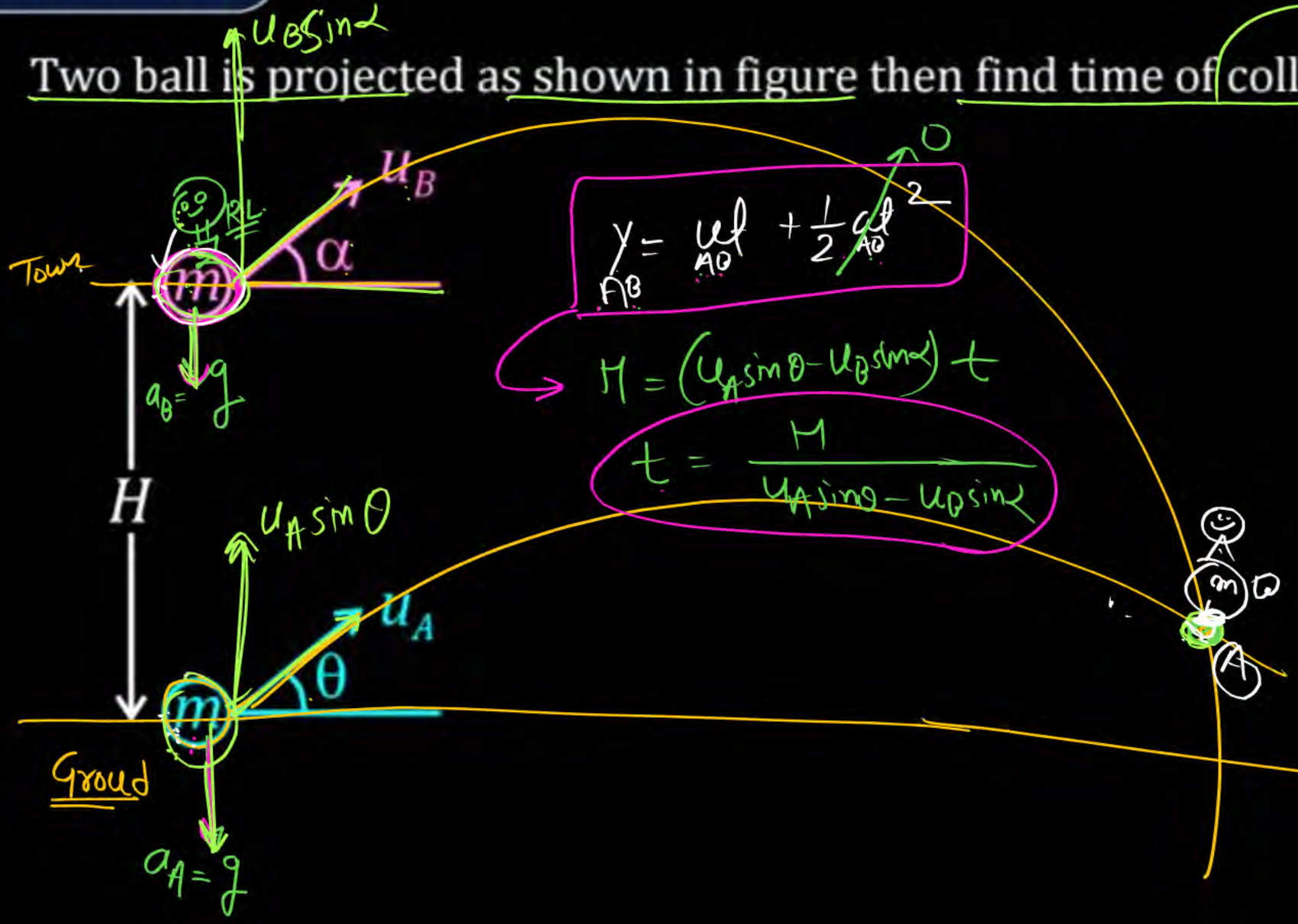


$$a = \frac{80-40}{10} = \frac{40}{10} = 4\,m/s^2$$

Question

JEE-Adv

Two ball is projected as shown in figure then find time of collision.



$$y_{AB} = u_{AB} + \frac{1}{2} a_{AB} t^2$$

$$H = (u_A \sin\theta - u_B \sin\alpha)\, t$$

$$t = \frac{H}{u_A \sin\theta - u_B \sin\alpha}$$

Consider moving

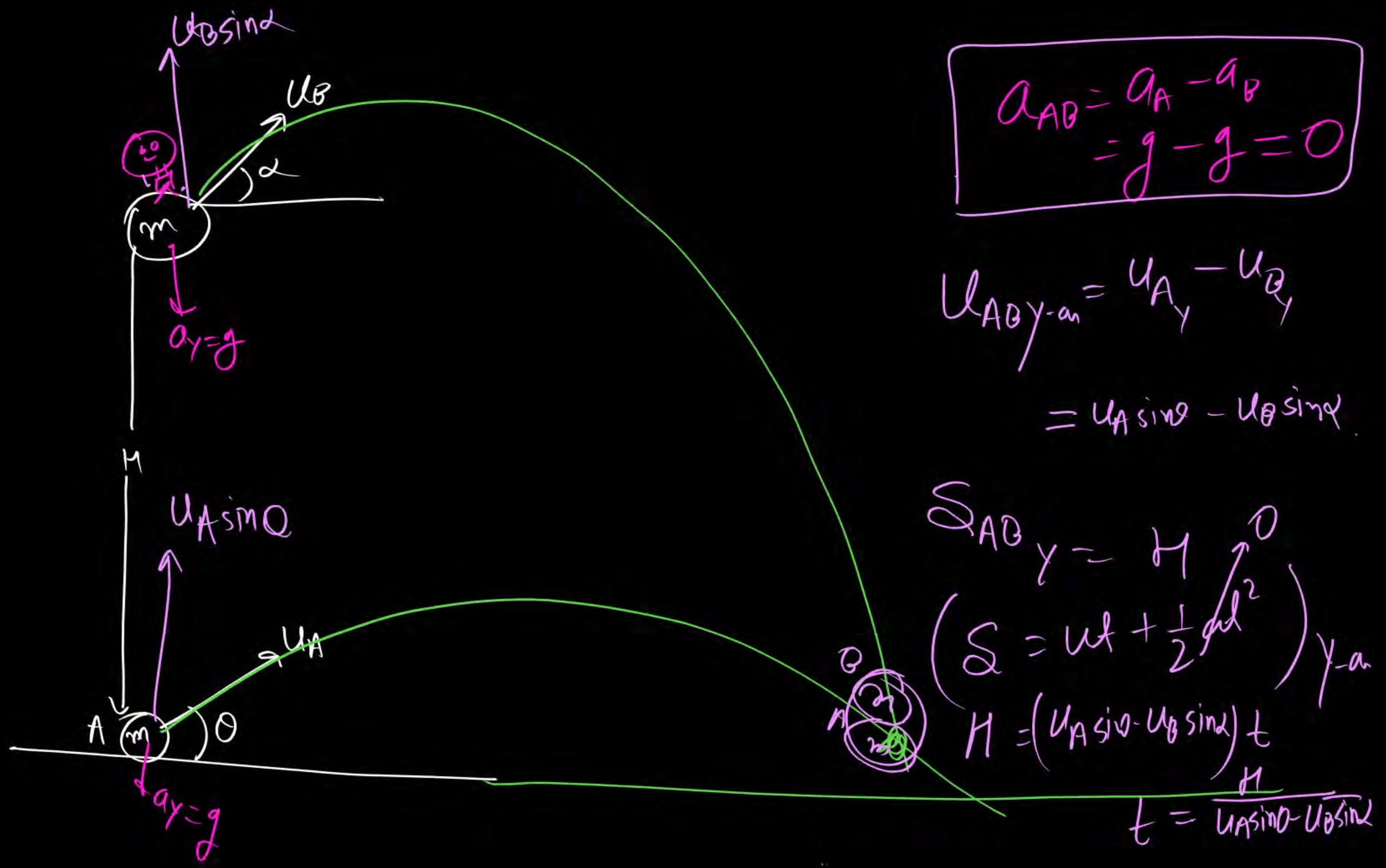
$$a_{AB} = a_A - a_B$$

$$= g - g = 0$$

$$[a_{AB} = 0]_{y\text{-axis}}$$

$$(u_{AB})_y = u_{Ay} - u_{By}$$

$$(u_{AB})_y = u_A \sin\theta - u_B \sin\alpha$$



$$a_{AB} = a_A - a_B$$
$$= g - g = 0$$

$$u_{ABy\text{-}an} = u_{A_y} - u_{B_y}$$

$$= u_A \sin\theta - u_B \sin\alpha$$

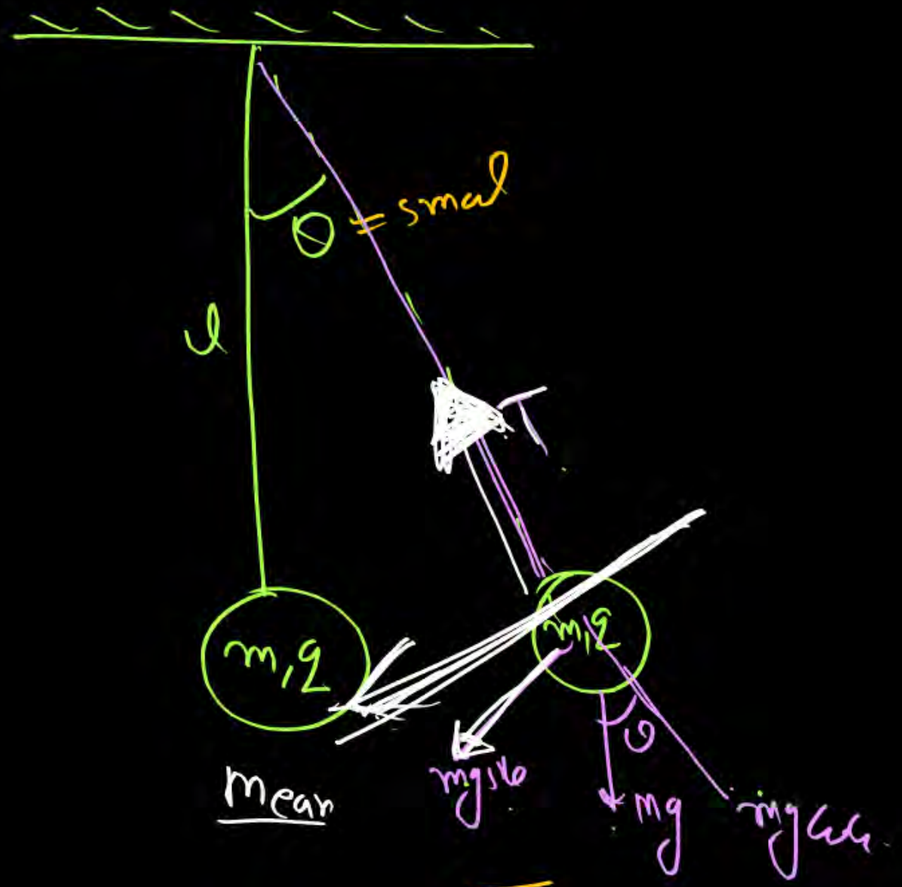
$$S_{AB_y} = H \quad (0)$$

$$\left(S = ut + \frac{1}{2}at^2\right)_{y\text{-}an}$$

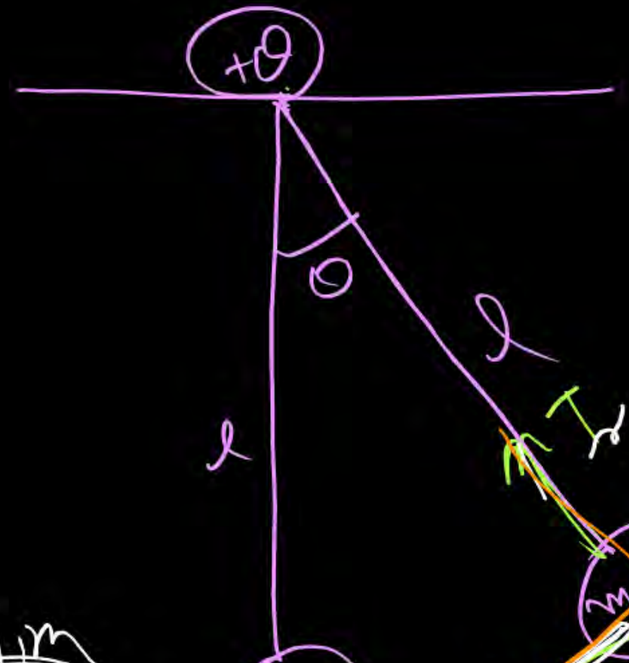
$$H = (u_A \sin\theta - u_B \sin\alpha)\, t$$

$$t = \frac{H}{u_A \sin\theta - u_B \sin\alpha}$$

Simple Pendulum



$$T = 2\pi\sqrt{\frac{l}{g}}$$



$T' = T$

$f_{elas} = \frac{Kl^2}{4}$

S.H.M → Restoring

$$T' = 2\pi\sqrt{\frac{l}{g}}$$

Jisko → 60% se Jayda
continue

Nahi to Basic math Me hi raho

Basic math details me chal raha


THANK
YOU